



■ Features :

- Universal AC input / Full range(up to 277VAC)
- Built-in constant current limiting circuit with adjustable OCP level
- Fully isolated plastic case
- Protections:Short circuit/Over load/Over voltage/Over temperature
- Built-in active PFC function
- IP64 design for indoor or outdoor installations
- Small and compact size
- Cooling by free air convection
- 100% full load burn-in test
- High reliability,low cost
- Suitable for Damp / wet locations
- Suitable for LED lighting and moving sign applications
- 2 years warranty

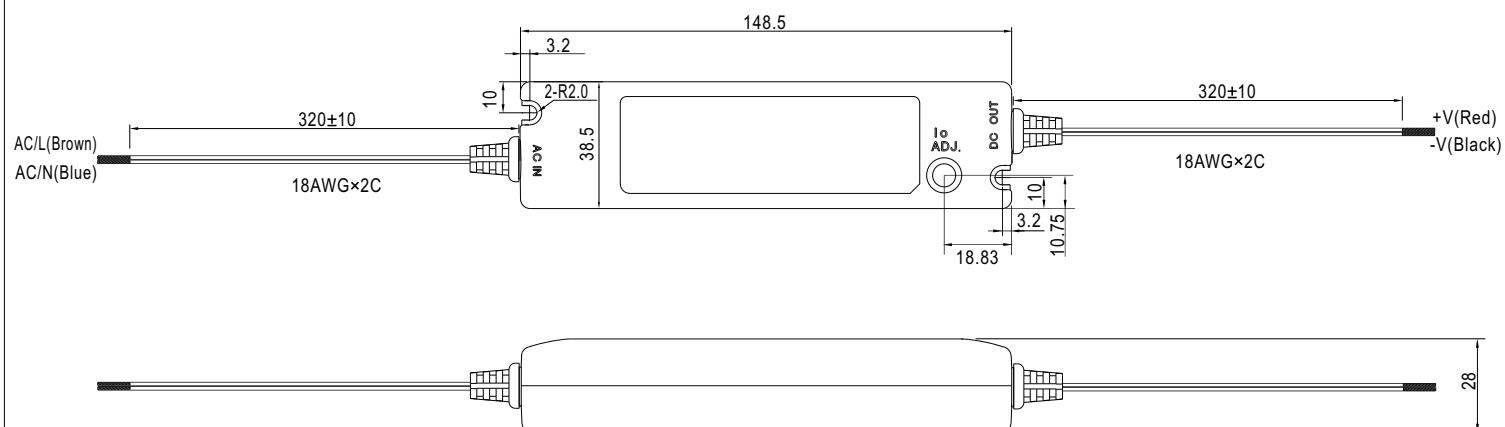


SPECIFICATION

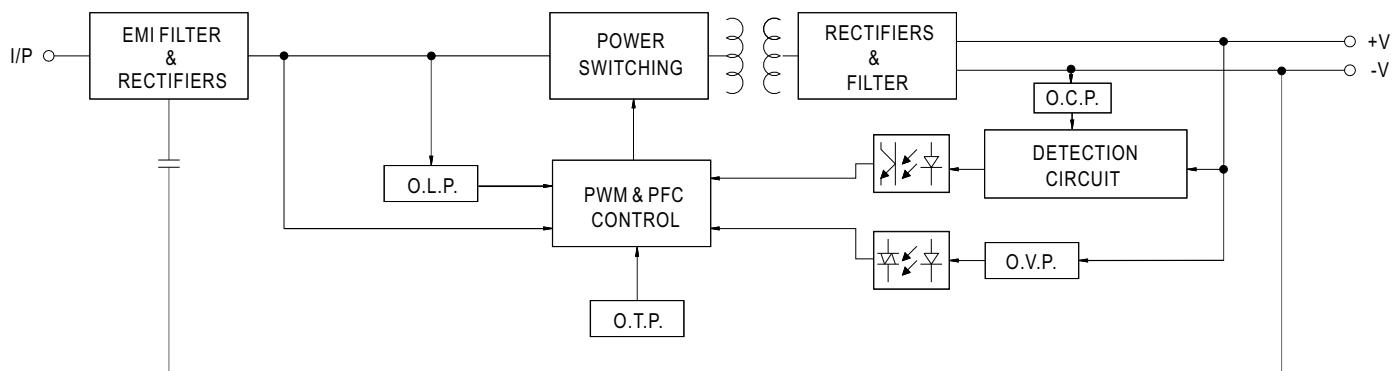
MODEL	PLN-20-12	PLN-20-18	PLN-20-24	PLN-20-36	PLN-20-48
OUTPUT	DC VOLTAGE	12V	18V	24V	36V
	LED OPERATION VOLTAGE Note.5	9 ~ 12V	13.5 ~ 18V	18 ~ 24V	27 ~ 36V
	RATED CURRENT	1.6A	1.1A	0.8A	0.55A
	CURRENT RANGE	0 ~ 1.6A	0 ~ 1.1A	0 ~ 0.8A	0 ~ 0.55A
	CURRENT ADJ. RANGE	75% ~ 100%			
	RATED POWER	19.2W	19.8W	19.2W	19.8W
	RISSLE & NOISE (max.) Note.2	2.5Vp-p	3.0Vp-p	3.0Vp-p	3.8Vp-p
	VOLTAGE TOLERANCE Note.3	±10%			
	LINE REGULATION	±3.0%			
	LOAD REGULATION	±10%			
	SETUP TIME	2300ms / 230VAC 3000ms / 115VAC at full load			
INPUT	VOLTAGE RANGE Note.4	90 ~ 277VAC 127~392VDC			
	FREQUENCY RANGE	47 ~ 63Hz			
	POWER FACTOR	PF=0.9 at 75~100% load, 115VAC/230VAC			
	EFFICIENCY(Typ.)	80%	81%	82%	83%
	AC CURRENT	0.4A/115VAC	0.2A/230VAC		
	INRUSH CURRENT(max.)	40A/230VAC			
PROTECTION	LEAKAGE CURRENT	0.5mA / 240VAC			
	OVER CURRENT Note.5	95 ~ 110%			
		Protection type : Constant current limiting, recovers automatically after fault condition is removed			
	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed.			
	OVER VOLTAGE	14 ~ 16V	19 ~ 22V	27 ~ 34V	41 ~ 46V
ENVIRONMENT	OVER TEMPERATURE	110°C±10°C (TSW1)			
		Protection type : Shut down o/p voltage, recovers automatically after temperature goes down			
SAFETY & EMC	WORKING TEMP.	-30 ~ +60°C (Refer to output load derating curve)			
	WORKING HUMIDITY	20 ~ 90% RH non-condensing			
	STORAGE TEMP., HUMIDITY	-40 ~ +80°C, 10 ~ 95% RH			
	TEMP. COEFFICIENT	±0.06%/°C (0 ~ 50°C)			
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes			
OTHERS	SAFETY STANDARDS	IEC61347-1, IEC61347-2-13, TUV EN61347-1, EN61347-2-13, UL8750, IP64 approved			
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC			
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms/500VDC / 25°C/ 70%RH			
	EMI CONDUCTION & RADIATION	Compliance to EN55015			
	HARMONIC CURRENT	Compliance to EN61000-3-2 Class C(= 75% load);EN61000-3-3			
	EMS IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11;EN61547, light industry level, criteria A			
NOTE	MTBF	643.6Khrs min. MIL-HDBK-217F (25°C)			
	DIMENSION	148.5*38.5*28mm (L*W*H)			
	PACKING	0.18Kg; 60pcs/12.8Kg/0.9CUFT			
1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. Derating may be needed under low input voltage, please check the static characteristic for more details. 5. Constant current operation region is within 75% ~ 100% rated output voltage. This is the suitable operation region for LED related applications, but please reconfirm special electrical requirements for some specific system design. 6. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.					

■ Mechanical Specification

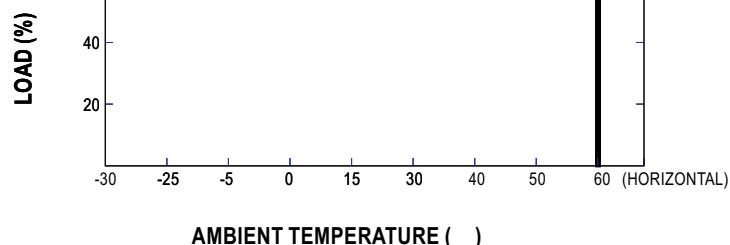
Case No.989B Unit:mm



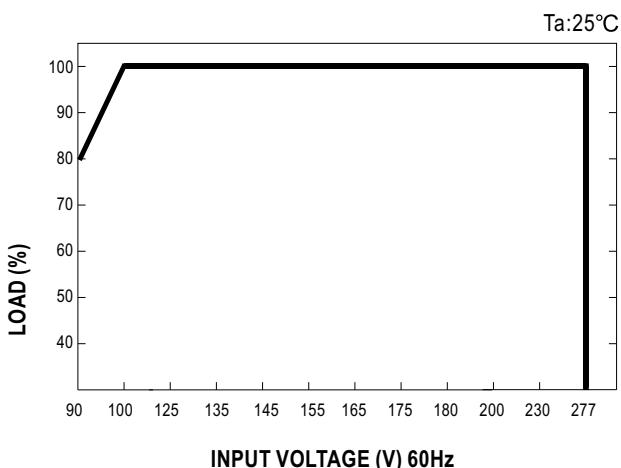
■ Block Diagram



■ Derating Curve



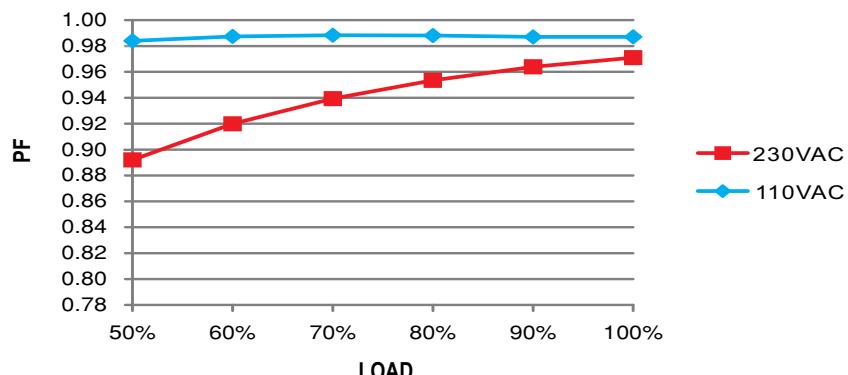
■ Static Characteristics



■ Power Factor Characteristic

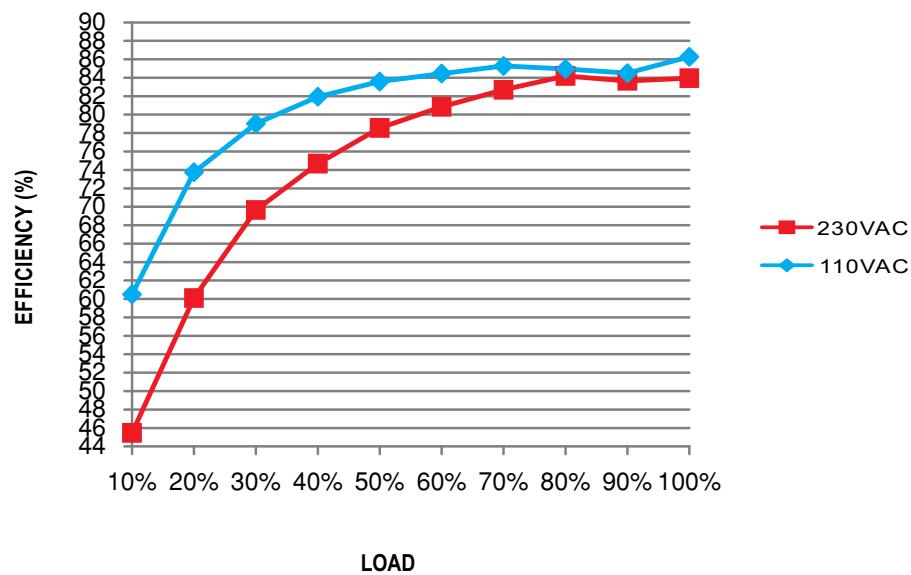
Power factor will be higher than 0.9 when output loading is 75% or higher.

Constant Current Mode



■ EFFICIENCY vs LOAD (48V Model)

PLN-20 series possess superior working efficiency that up to 83.5% can be reached in field applications.



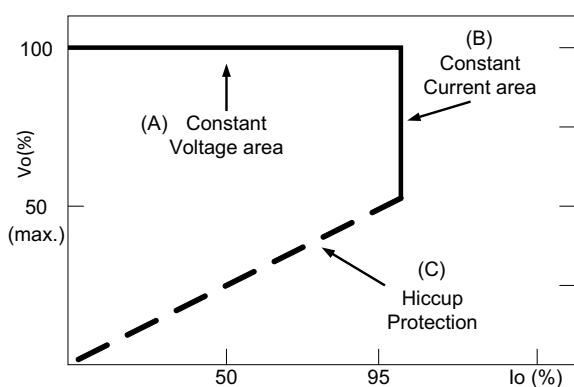
LOAD

■ DRIVING METHODS OF LED MODULE

There are two major kinds of LED drive method "direct drive" and "with LED driver".

A typical LED power supply may either work in "constant voltage mode (CV) or constant current mode (CC)" to drive the LEDs.

Mean Well's LED power supply with CV+ CC characteristic can be operated at both CV mode [with LED driver, at area (A)] and CC mode [direct drive, at area (B)].



Typical LED power supply I-V curve